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ABSTRACT

The use of a basic skills testing program to identify and remediate academic weaknesses of adult reentry graduate students (mean age 30.1 years) was studied longitudinally. The entering masters' level students majoring in business administration were studied in fall 1980 and again after the spring/summer registration of 1984. Through assessment and coursework, 84 students demonstrated at least minimum skills competencies in English usage and algebra, but 54 students had at least one deficiency. The rates of academic success, a minimum cumulative grade point average of 3.0 on a 4.0 scale, and attrition, nonenrollment in 1983 of students not meeting their degree requirement, varied by group. The rates of academic success were 58 percent of students meeting the basic skills requirements and 9 percent for the other students. The attrition rates were 29 percent for students demonstrating basic skills in English usage and algebra versus 69 percent for those with at least one skill deficiency. Therefore, the testing-remediation paradigm for older, masters' level students, which requires basic skills minimum competencies, was supported by the academic success and attrition criteria. These findings are in agreement with those of a similar followup study of older, reentry college majors. (Author/SW)

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Abstract

A LONGITUDINAL STUDY OF THE ENGLISH USAGE AND ALGEBRA BASIC SKILLS TESTING REMEDIATION PARADIGM FOR OLDER, MASTERS' LEVEL STUDENTS

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Governors State University

A total of 138 entering masters' level students majoring in business administration in the fall term of 1980 were followed for three years. Through assessment and course work, 84 students demonstrated at least minimum basic skills competencies in English usage and algebra, but 54 students had at least one deficiency. The rates of academic success, a minimum cumulative grade point average of 3.0 on a 4.0 scale, and attrition, non-enrollment in 1983 of students not meeting their degree requirement, varied by group. Specifically, the rates of academic success were 58 percent for students meeting the basic skills requirements and 9 percent for the other students. The attrition rates were 29 percent for students demonstrating basic skills in English usage and algebra versus 69 percent for those with at least one skill deficiency. Thus, the testing-remediation paradigm for older, masters' level students demanding minimum competencies in the basic skills necessary to challenge the curriculum is supported by the criteria of academic success and of attrition. These findings are in agreement with those of a similar follow-up study of older, re-entry college juniors.

Paper presented at the annual meeting of the Midwestern Educational Research Association at Chicago in September, 1984.

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At an upper division university, a basic skills testing program in the College of Business and Public Administration has been evaluated by areas assessed, English and mathematics. These studies focused upon the implications of identifying and remediating weaknesses of adult re-entry students during their first year of academic history.

English skills were assessed by the Test of Standard Written English (Educational Testing Service, 1974-1978). Students not earning at least the national norming median were required to pass an English course designed to remediate their weakness. Academic success was found to be highest for students passing the test, lower for students passing the English course, and lowest for students not passing or enrolling in the additional course requirements (Suddick, 1981, 1982).

Mathematics skills were assessed by the algebra examinations of the Descriptive Tests of Mathematics Skills (Educational Testing Service, 1979). Students not earning at least a raw score of 21 on Elementary Algebra Skills and at least a raw score of 15 on Intermediate Algebra Skills were required to pass an algebra course before enrolling in calculus and statistics. For students passing the algebra course, their grades in the prerequisite course correlated positively with their grades earned in the advanced level mathematics courses. Furthermore, the grades

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earned in the calculus and statistics courses were higher for students passing the DTMS, but remediation was found to be successful (Suddick and Collins, 1984).

Based upon the cited evaluations, Suddick and Collins (1984 b) concluded that the basic skill level of returning adult students should be assessed and that academic success would be enhanced by requiring all students to achieve a minimum level of basic skill competencies. This hypothesis was tested by following entering junior students for three years. Suddick and Collins (1984 a) compared the rates of academic success and attrition of the 146 students meeting basic skills competencies in English usage and algebra to those of the 71 students having at least one deficiency. The academic success rates, a minimum cumulative grade point average of 2.0 on a 4.0 scale, were 90 percent for students demonstrating the basic skills requisites versus 29 percent for students yet to meet these requirements. The attrition rates were 29 percent for students meeting both basic skills requirements and 95 percent for those with at least one skill deficiency. These differences were statistically significant.

The purpose of this study was to replicate the Suddick and Collins (1984 a) longitudinal study of older, re-entry college juniors with older masters' level students. The academic good standing and attrition criteria were identified with the exception of a cumulative grade point average of 3.0 or higher on a 4.0 scale to denote academic success.

Method

In the fall term of 1980, 138 masters' level students, mean age of 30.1 years, entered the institution as business administration majors.

Sixty-one percent were males, and they were primarily of the majority ethnic group, 75 percent. The students had the option of participating in the testing program, 56 of 100 successfully challenged the TSWE, and 62 of 96 passed both DTMS algebra tests. In total, 38 students passed both tests, 18 students passed the TSWE, and 24 students passed the DTMS. After three years, 84 students met the English and mathematics competencies: 38 initially passing the tests, 30 by passing one test and one course, and 16 by passing both courses.

After the spring/summer registration of 1984, the academic histories of the students were reviewed. Students who had not been graduated were classified as drop-outs if they had not enrolled for the first two academic terms of 1983. Students were denoted as academically successful if their cumulative grade point average was at least 3.0 on a 4.0 scale.

Results

The attrition rate of the students meeting the basic skill requirements was 29 percent versus 69 percent for those who did not meet the English and algebra requirements. The ratio difference, 40 percent, was statistically significant ($t_{136} = 4.61$, $p < 0.001$).

The other criterion was a grade point average of 3.0 or higher on a 4.0 scale. The percentages by group were as follows: 9 for those with one or both deficiencies and 58 for their peers satisfying both requirements. The difference in percentages was 49 and was statistically significant ($t_{136} = 5.77$, $p < 0.001$).

Discussion

At one institution, a testing-remediation paradigm has been implemented and evaluated for entering juniors in a three year follow-up study.

The students who met the basic skills level either by examinations or by courses had a 66 percent higher rate of academic success and a 54 percent lower attrition rate than students not demonstrating minimum competency levels in English and algebra. This study was replicated for entering masters' level students. The students who met the basic skills requirements had a 40 percent higher rate of academic success and a 49 percent lower attrition rate than those not demonstrating minimum competency in both English and algebra.

The variance in rates of academic success and attrition between the juniors and masters' level students may be tied to the differing levels of academic good standing; i.e., 2.0 and 3.0 on a 4.0 scale, respectively. Nevertheless, the trends are statistically significant for both the undergraduate transfers and graduate students. This strongly supports the position that basic skills required to challenge the curriculum are necessary for academic success and continued pursuit of the degree.

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